REMARKS

Claims 1-3, 5 and 12 are pending in this application. By this Amendment, non-elected claims 6-10 and 13 are canceled without prejudice or disclaimer. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration; (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made to cancel non-elected claims in anticipation of allowance of this application. Entry of the amendments is thus respectfully requested.

Applicants thank the Examiner for the indication that claims 1, 2 and 5 are allowable.

The Office Action rejects claim 12 under 35 U.S.C. §102(b) (and/or §102(a)) as anticipated by WO 03/085049 A1 to Hu et al. ("Hu") alone or, optionally, taken with WO 03/080513 A2 to Johnson et al. ("Johnson"). Applicants respectfully traverse the rejection.

Hu fails to disclose "a multifilament fiber comprising at least 5 filaments" as required by claim 12. The specification discusses Hu as background at page 1, lines 5-19, which is reproduced below for convenience (emphasis added):

> Composites of single-wall carbon nanotubes (SWNT) and aromatic polyamides are known from WO 03/085049. According to this reference aromatic polyamide is added to SWNT to form the composite. It was also disclosed that aromatic polyamide can be mixed with SWNT in an acid to form a dope, which dope can be spun into a fiber or film. The homogeneous dope mixture was obtained by mixing SWNT and PPTA in sulfuric acid at 80-85° C for several hours. The preferred aromatic polymer is PPTA. The method used in this

> reference has various disadvantages. For instance, if fibers are made only monofilament fibers are obtained. Further, tensile strength and modulus are relatively low. Tensile strength of 0.33 to 0.35 GPa and modulus of 13 to 19 GPa were obtained with the as-spun fiber. A further disadvantage of this method is the need of large quantities of SWNT in the mixture. According to this reference about 5 to 10 wt.% of SWNT, based on the total weight of SWNT and PPTA, is necessary to obtain composite materials with the above tensile strength and modulus. Because SNWT are extremely expensive compounds, this is a serious burden to commercialization of such products.

The Office Action asserts that the "fibers" of Hu include yarns and multifilament fibers. See Office Action at page 2. The Office Action points to two U.S. patents (U.S. Patent Nos. 6,068,919 and 6,114,037) and a Textile dictionary in an attempt to support this assertion. Id. However, as discussed below, one of ordinary skill in the art would recognize Hu as only disclosing monofilament fibers.

In Example 1, Hu discloses that "[t]he diameter of the fiber was measured using an optical microscope." See page 7, lines 31-32. A fiber diameter can only be measured by optical microscopy if the fiber is a monofilament fiber. It is impossible to measure a fiber diameter by optical microscopy if the fiber is a multifilament fiber. Thus, the use of optical microscopy in Hu is irrefutable evidence that Hu is only directed to monofilament fibers and, thus, does not disclose multifilament fibers.

There are other indications that Hu is only directed to monofilament fibers. Hu refers to "spinning" a single-wall carbon nanontube-polyamide dope into a fiber. See, e.g., Abstract. In processes for creating polymeric fibers from synthetic polymers, the term "spinning" refers to a specialized form of extrusion in which a liquid "spin dope" is extruded by a spinneret to form a fiber. This should not be confused with the unrelated and traditional meaning of "spinning," which refers to the twisting together of plant, animal or synthetic fibers to form

yarn (or thread, rope, cable, etc.) in which yarn is also understood in the traditional sense of the term.

Moreover, spinnerets for "spinning" can have single or multiple orifices. Spinnerts having multiple orifices typically have 500 to 2000 orifices. When a single-orifice spinneret is used, a monofilament fiber is produced. When a spinneret having multiple orifices is used, a multifilament fiber is produced.

In Hu, a single-wall carbon nanontube-polyamide dope is spun to obtain a monofilament fiber by a single-orifice spinneret. Accordingly, Hu does not use the term "fiber" in the broad sense of the term, which would include both monofilament and multifilament fibers. In the art and in Hu, a "monofilament fiber" may simply be referred to as a "fiber." Hence, the term "fiber" is used in a more narrow sense. Likewise, a "monofilament fiber" may be referred to as a "yarn," which, of course, is a "monofilament yarn." Further, the term "fiber" may refer to a (1) yarn, and/or (2) filament. Only in the case in which "fiber" is used to refer to a "monofilament fiber" does the term "fiber" mean both a "yarn" and a "filament;" all of monofilament character.

As evidence that Hu is only directed to monofilament fibers, Hu discloses that "[t]he diameter of the spinneret lumen is generally in the range of about 60 microns and about 300 microns" (emphasis added). See page 6, lines 6-7. The reference to a "lumen" (singular) indicates that Hu only discloses single-orifice spinnerets for producing monofilament fibers. If Hu made use of a spinneret having multiple orifices, then that number of orifices would presumably have been specified. In addition, the specified sizes of the orifices of the spinnerets in Hu indicate that only single-orifice spinnerets were used because spinnerets having multiple orifices in which each orifice is smaller than 60 μm are typically used to produce multifilament fibers from this type of polymer. See Hu at page 7, lines 28-29, page

8, lines 13-14 (disclosing that a 250-micron diameter spinneret and a 120-micron diameter spinneret were used to extrude the dope in Examples 1 and 2, respectively).

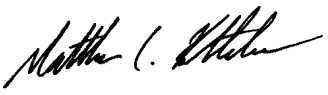
Johnson is merely cited for showing an aspect ratio greater than 100 and is not further relevant to Hu.

Thus, Hu, alone or taken with Johnson, does not anticipate claim 12. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of this application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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